2008 SBIR Phase 2 Awardees

Aeronautics Research

Aviation Safety

Hydrophobic Polymers with Adherend Complexing Sidechains as Durable Aerospace Adhesives
NanoSonic, Inc., Blacksburg, VA

H/OZ: PFD and Collaborative Flight Control System
Emerald Sky Technologies, Columbia, MD

Avionics for Scaled Remotely Operated Vehicles
Coherent Technical Services, Inc.
Lexington Park, MD

Micromechanical Models for Composite NDE and Diagnostics
JENTEK Sensors, Inc., Waltham, MA

Fiber Laser Coherent Lidar for Wake-Vortex Hazard Detection
Fibertek, Inc., Herndon, VA

Cognitive Modeling for Closed-Loop Task Mitigation
Intelligent Automation, Inc., Rockville, MD

Upset Prevention and Recovery for Unimpaired and Impaired Aircraft
Techno-Sciences, Inc., Beltsville, MD

Fundamental Aeronautics

Calibration of 3D Woven Preform Design Code for CMC Materials and ***Extreme Environment Damage Index and Accumulation Model for CMC Laminate Fatigue Life Prediction***
Materials Research and Design, Wayne, PA

Numerical and Physical Modeling of the Response of Resonator Liners to Intense Sound and High Speed Grazing Flow
Hersh Acoustical Engineering, Inc., Calabasas, CA

ZEUS-DO: A Design Oriented CFD-Based Unsteady Aerodynamic Capability for Flight Vehicle Multidisciplinary Configuration Shape Optimization
Zona Technology, Inc., Scottsdale, AZ

A Comprehensive CFD Tool for Aerothermal Environment Around Space Vehicles
CFD Research Corporation, Huntsville, AL

Metal Rubber Sensor Appliqués for Rotor Blade Air
NanoSonic, Inc., Blacksburg, VA

Fast Responding PSP for Rotorcraft Aerodynamic Investigations
Innovative Scientific Solutions, Inc., Dayton, OH

Hybrid Finite Element Analysis for Rotorcraft Interior Noise Simulations
Michigan Engineering Services, LLC, Ann Arbor, MI

Airspace Systems

Integration of Performance Based Operations into ATM and TFM Simulations and ***In Situ Wake Vortex Encounter Detection and Reporting System***
Aerotech Research, Newport News, VA

Aeronautics Test Technologies

Versatile Fiber Optic 6-Component Force Measurement System
Luna Innovations Incorporated, Roanoke, VA

Exploration Systems

Avionics and Software

Radiation Mitigation Methods for Reprogrammable FPGA
RNET Technologies, Inc., Dayton, OH

A Reliable Electronic Package for Space Exploration
Sienna Technologies, Inc., Woodinville, WA

Structures, Materials and Mechanisms

Composite Matrix Systems for Cryogenic Applications
Applied Poleramic, Inc., Benicia, CA

Radiation Shielding

Long Duration Space Shelter Shielding
Physical Sciences, Inc., Andover, MI

Science

Sensors, Detectors and Instruments

1.26 Single Frequency Fiber Laser
NP Photonics, Inc., Tucson, AZ

Compact, Wavelength Stabilized Seed Source for Multi-Wavelength Lidar Applications
ADVR, Inc., Bozeman, MT

Q-Switched High Power Single Frequency 2 Micron Fiber Laser
AdValue Photonics, Inc., Tucson, AZ

Digital Array Gas Radiometer (DAGR)
GATS, Inc., Newport News, VA

High Power Compact Single-Frequency Volume Bragg Er-Doped Fiber Laser
OptiGrate, Inc., Orlando, FL

Efficient and Compact Semiconductor Laser Transmitter Modules
EM4, Inc., Bedford, MA

Single-Frequency Semiconductor Lasers Operating at 1.5 and 2.0 microns and ***Wavelength Stabilized High Brightness Direct Diode Pumps for Solid State LIDAR Systems at Eye-Safe Wavelengths***
nLight Photonics, Vancouver, WA

A High Reliability Frequency Stabilized Semiconductor Laser Sources
Princeton Optronics, Inc., Mercerville, DE

Information Technologies

Data Filtering and Assimilation of Satellite Derived Aerosol Optical Depth
Tech-X Corporation, Boulder, CO

Space Operations

Space Transportation

Foamed Antenna Support for Very Large Apertures
Adherent Technologies, Inc., Albuquerque, NM